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COMMUNICATIONS INSTALLATIONS IN THE KARAGANDA AREA, USSR

[redacted]

PIC/R-18/59

NOVEMBER 1959

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PREFACE

This report has been prepared in answer to CIA RR/E/R-95/58, requesting detailed information on all communications installations within a 25-kilometer radius of Karaganda, USSR. Information in this report is based on an analysis of aerial photography and collateral reports.

25X1D A helpful analysis of collateral reports through [redacted] was prepared by the Radio Stations Branch, OCR/CIA.

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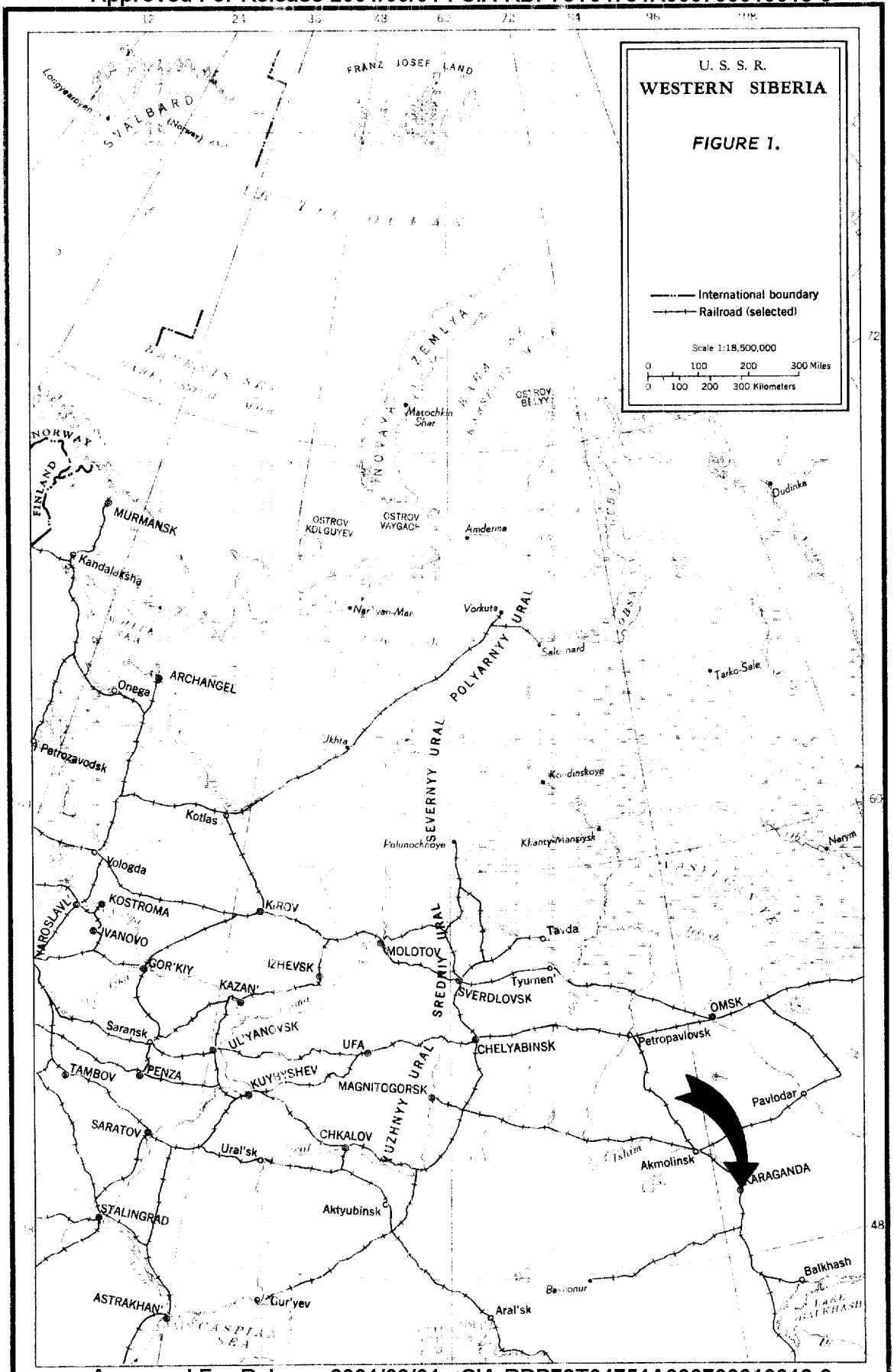

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I. INTRODUCTION

This report is an analysis of six communications installations which lie within a 25-kilometer radius of Karaganda, USSR (Figures 1 and 2). Included are point-to-point communications stations and local broadcasting stations. Air navigation facilities and surface-to-air communications facilities are not included. The six communications stations covered in this report include four radio stations, one television station, and one probable microwave station.

25X1D

Aerial photography [redacted] completely covers the area within a 25-kilometer radius of Karaganda. It should be noted, however, that 45 percent of the area is cloud-covered. A scan of the photography reveals the existence of a large radio station and a television station. A detailed photographic analysis of these two stations is included in this report. Collateral reports furnish a description of three other radio stations and one microwave station. Although these stations cannot be identified on the photography on which this report is based, due to cloud cover, the location and description of each are included in this report in order to provide the most complete intelligence on the communications installations in the Karaganda area.

II. RADIO STATION, INSTALLATION NO. 1

General

A radio station with local broadcasting and point-to-point communications facilities is located at 49°48'N/73°03'E, approximately 8 kilometers southwest of the new railroad station at New Karaganda (Figure 2, Item 1). It is served by an all-weather road, is enclosed by a fence, and covers approximately 128 acres (3,200 by 1,750 feet). The station consists primarily of a transmitter building with two adjacent cooling ponds, two support-type buildings, three rhombic antennas, and a guyed vertical radiator (Figures 3 and 4).

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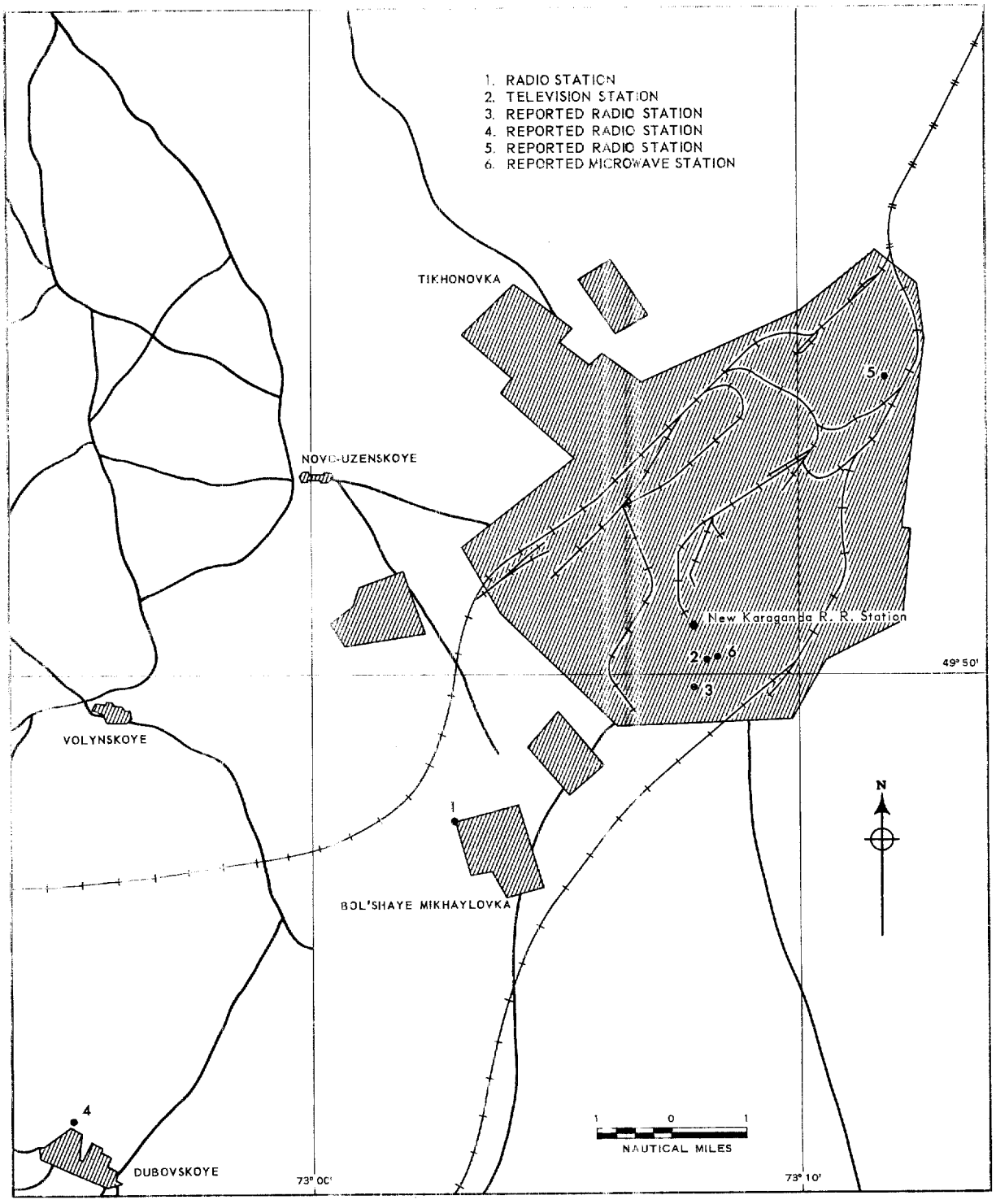

FIGURE 2. MAP OF COMMUNICATIONS FACILITIES, KARAGANDA, USSR.

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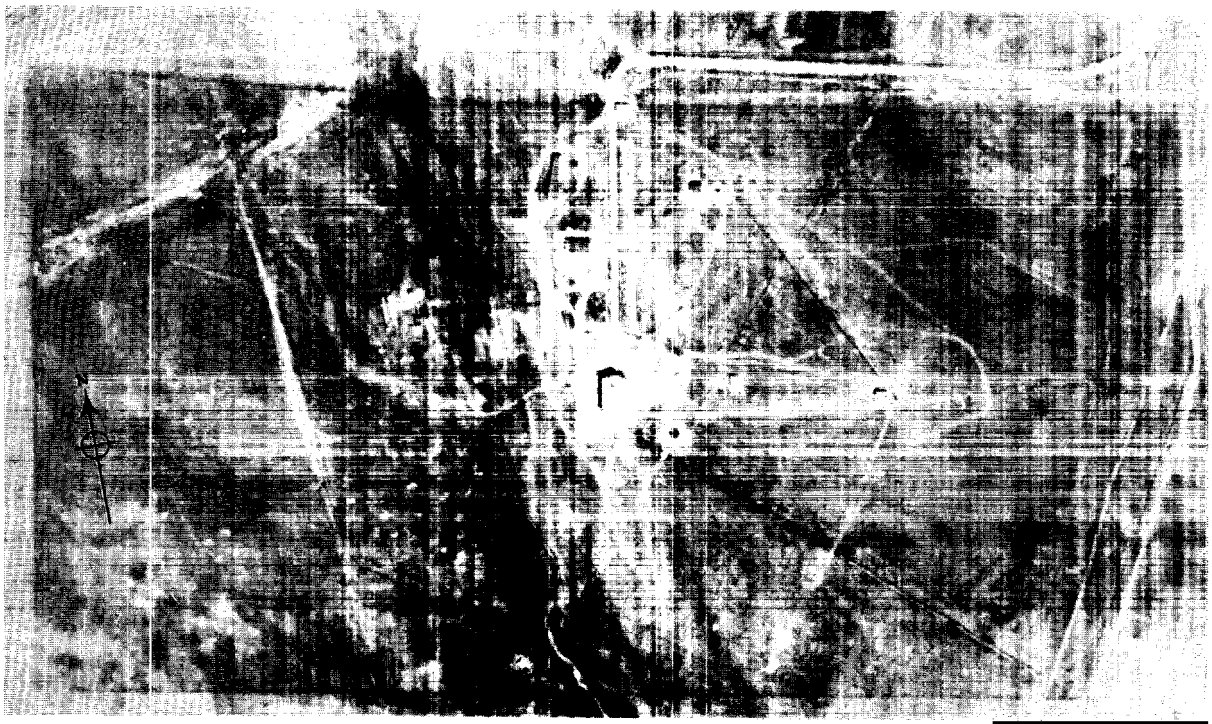

25X1D

FIGURE 3. AERIAL PHOTOGRAPH OF RADIO STATION, INSTALLATION NO. 1. [redacted]

Structures

There are eight buildings within the fenced installation (Figure 4). One of these is a transmitter building (Item F) which is a two-story struc-

TABLE 1. STRUCTURES, RADIO STATION, INSTALLATION NO. 1

STRUCTURES	IDENTIFICATION	NO. STORIES	ROOF TYPE	DIMENSIONS (FEET) (L - W - H)
25X1D A	GATE HOUSE	1	GABLE	[redacted]
B	SUPPORT BUILDING	1	SHED	120 x 25 x 10
C	SHACK	1	SHED	30 x 25 x 10
D	SUPPORT BUILDING	1	GABLE	65 x 35 x 10
E	SHACK	1	SHED	25 x 20 x 10
F	TRANSMITTER BUILDING	2	HIP	100 x 65 x 25
G	COOLING PONDS	--	-------	30 DIA.
H	UNIDENTIFIED BUILDING	1	SHED	[redacted]
25X1D I	TUNING HOUSE	1	SHED	

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ture, with two associated cooling ponds (Item G) 180 feet apart, located just east of the building. One pond contains water and the other appears to be empty. Probable buried cables extend out in various directions from the transmitter building. Table 1 is a tabulation of all structures in the area. Letter designations are keyed to Figure 4.

Antennas

A guyed vertical radiator 850 feet high is located in the center of the eastern portion of the station (Figure 4). At the base of this vertical radiator is a tuning house (Item I). Furrowed ground scars, which indicate a buried radial ground screen, radiate to a maximum of 850 feet from the base of the vertical radiator. A buried cable connects the tuning house with the transmitter building.

Concrete anchor bases and disturbed earth indicate the existence of four probable guyed stick masts (Items 4, 5, 6, and 7) southwest of the

25X1B transmitter building.

25X1B [redacted]

TABLE 2. RHOMBIC ANTENNAS, RADIO STATION, INSTALLATION NO. 1

25X1D

ANTENNA	MAJOR AXIS (FEET)	MINOR AXIS (FEET)	DISTANCES BETWEEN END POLES (FEET)	[redacted]	HEIGHT OF END AND SIDE POLES (FEET)	[redacted]
1	470	260	65		*	
2	950	480	110		*	
3	370	245	----		*	

25X1D

* - Undetermined

25X1B [redacted]

25X1B Two of the antennas make up a paired double-rhombic antenna (one day and one night), and the other is a single rhombic antenna. Table 2 is a tabulation of the rhombic antennas with their respective measurements. Number designations are keyed to Figure 4.

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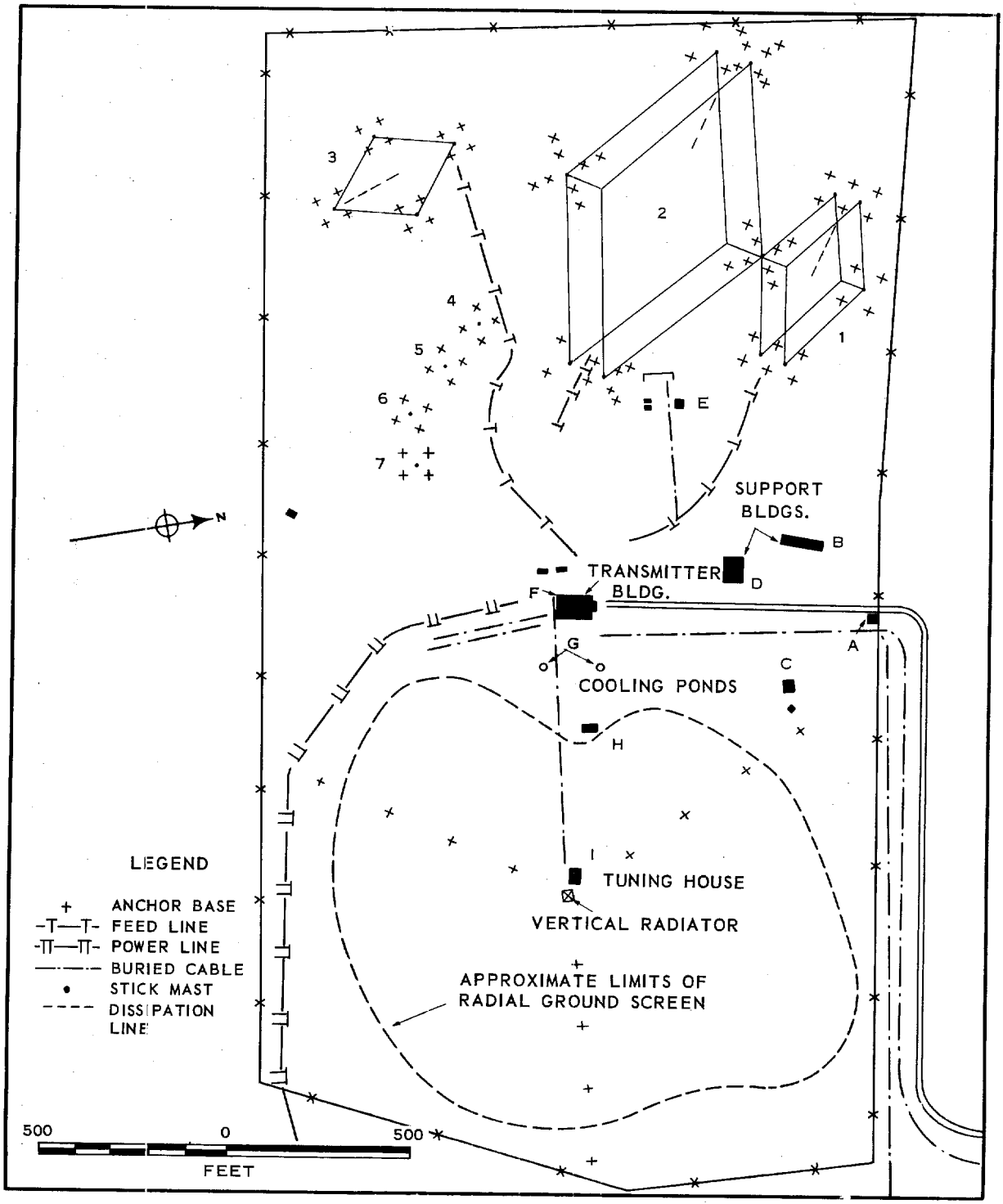

FIGURE 4. LINE DRAWING OF RADIO STATION, INSTALLATION NO. 1.

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Overhead Power and Communications Lines

From the urban area of New Karaganda an overhead power line, which may also carry land line communications, enters the station from the southeast and continues to the transmitter building (Figure 4).

III. TELEVISION STATION, INSTALLATION NO. 2

A television station is located at 49°50'N/73°08'E approximately one kilometer south of the railroad station in New Karaganda (Figure 2, Item 2). This station was reported in [redacted] to be under construction 1/2/, and a study of [redacted] aerial photography reveals that the station may be structurally complete (Figure 5). The major facilities consist of a 610-foot-high self-supporting steel lattice tower with a 65-foot-square base, a 105-foot stick mast, a [redacted] (diameter) cooling pond (Item F), a broad-

25X1D
25X1D
25X1D

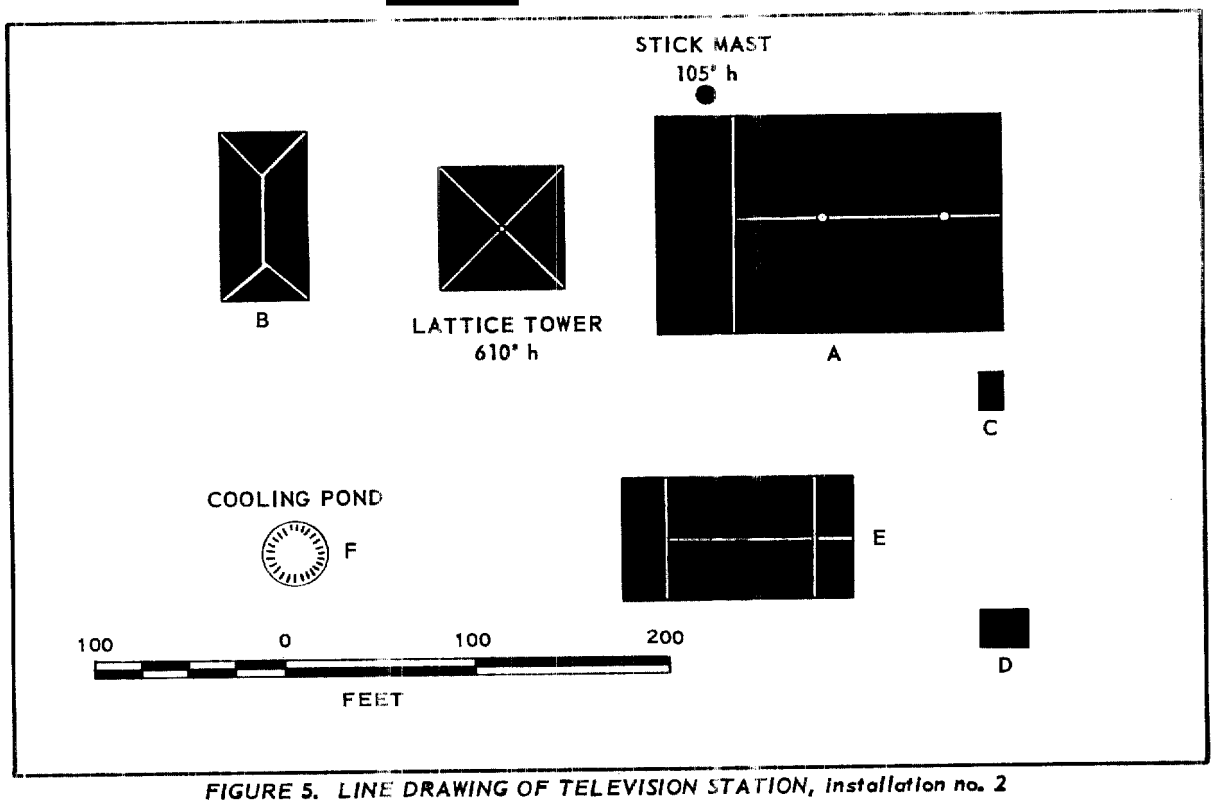

FIGURE 5. LINE DRAWING OF TELEVISION STATION, installation no. 2

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casting building (Item A), and several other buildings. Table 3 is a tabulation of all structures in the station. Letter designations are keyed to Figure 5.

TABLE 3. STRUCTURES TELEVISION STATION, INSTALLATION NO. 2

STRUCTURE	IDENTIFICATION	NO. STORIES	ROOF TYPE	DIMENSIONS (L) (W) (H)
A	BROADCAST BUILDING	2 & 3	COMPLEX	180 x 115 x 40
B	UNIDENTIFIED	2	HIP	90 x 45 x 25
C	UNIDENTIFIED	1	FLAT	20 x 15 x 10
D	UNIDENTIFIED	1	FLAT	[redacted]
E	UNIDENTIFIED	1	COMPLEX	120 x 65 x 15
F	COOLING POND	----	-----	[redacted]

25X1D

25X1D

IV. REPORTED RADIO STATION, INSTALLATION NO. 3

A radio transmitting station is reported to be located at 49°49'N/73°08'E, 2 kilometers south of the railroad station and about .5 kilometers southeast of the Military Administration Headquarters Building in New Karaganda (Figure 2, Item 3). The site cannot be identified on photography due to cloud cover. This station, which is enclosed by a barbed wire fence 4/, covers approximately 3 acres (360 by 360 feet) 3/ and is probably the local braodcasting station known as "Radio UZE".

Structures reported to be located at the station are one and/ or two single-story brick buildings which measure 20 by 7 by 5 meters 3/ and 12 by 6 by 4 meters. 4/ Two 25- to 50-meter-high steel trestle or lattice-type masts are reported to be located at the station. 3/4/ The masts are braced and located about 50 meters apart. 4/ This station may be associated with the Military Administration Headquarters. 5/

V. REPORTED RADIO STATION, INSTALLATION NO. 4

A radio station, which due to cloud cover cannot be identified on this photography, is reported to be located at 49°44'N/72°55'E, approximately 20 kilometers southeast of New Karaganda in the town of Dubovskoye

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(Figure 2, Item 4). The station is reported to consist of two large steel masts, each 5 meters high, and from four to six smaller masts. From four to six small antennas are reported to be positioned on the top of each of the large masts 6/.

25X1C

VII. REPORTED MICROWAVE STATION, INSTALLATION NO. 6

A probable microwave station, which due to cloud cover cannot be identified on this photography, is reported to be located at 49°50'N/ 73°08'E on the Post, Radio, and Telegraph Administration Building approximately one kilometer southeast of the railroad station in New Karaganda, (Figure 2, Item 6). This building of brick and stucco construction is two to three stories in height and measures about 70 by 20 by 15 meters.

25X1D 8/. Two disk-shaped objects, approximately [redacted] in diameter, arranged one above the other, are positioned on a vertical pole 2 meters high. The pole is mounted on a wooden platform which is located of the roof of the building. 9/ The disk-shaped objects are probably microwave antennas.

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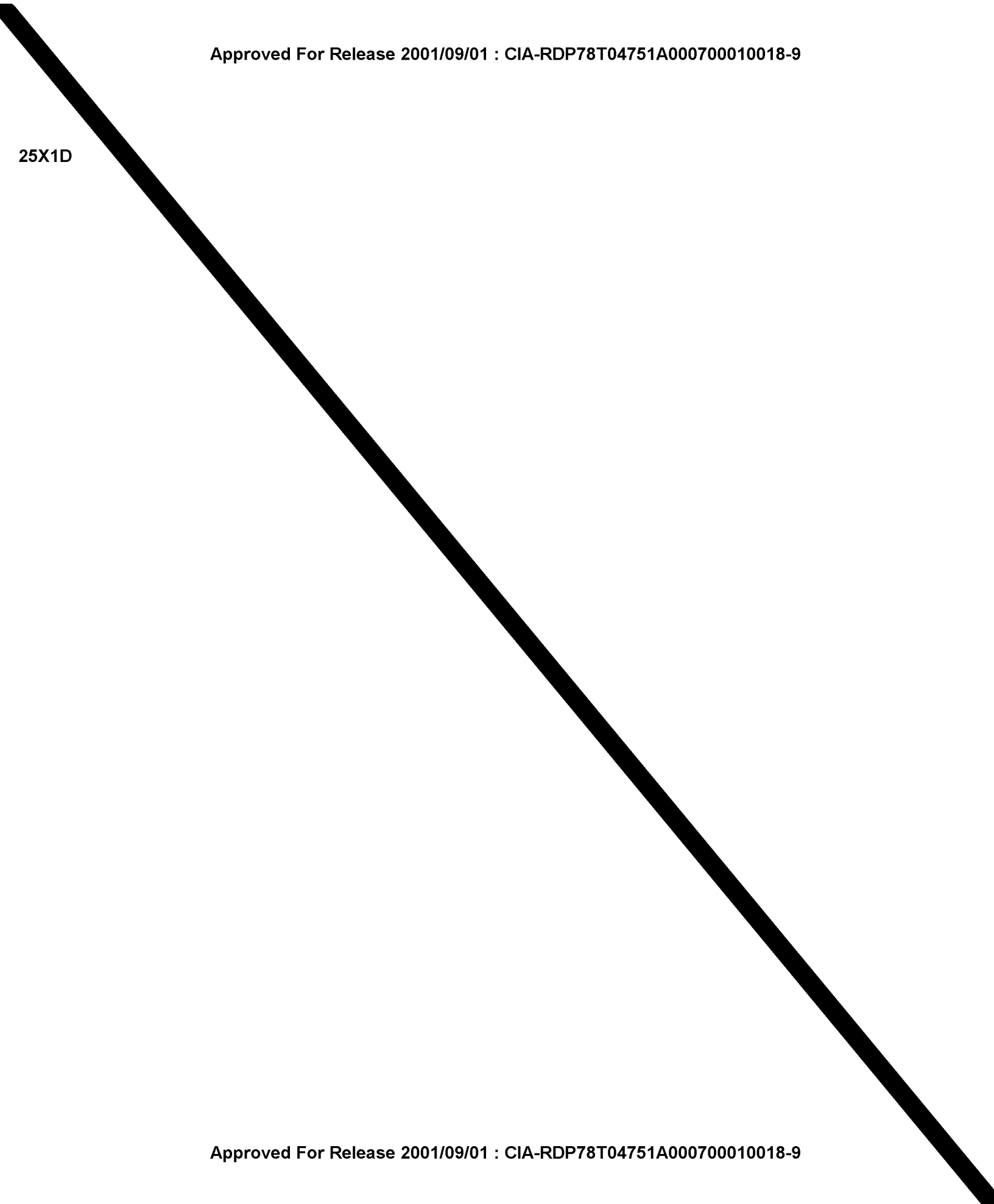
25X1D



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